

AMENDMENTS TO THE CLAIMS

1-11. (Cancelled)

12. (Currently Amended) A computer-implemented system for managing a collection of mutually dependent information contents that are networked over the Web, said system comprising:

a collection of Web documents, which are a content net, that comes with computer-executable representations of dependency relationships among elements of the Web documents;

means for automatically propagating updates that are introduced in elements of the Web documents to all elements of the Web documents that depend on the updated elements;

a dependency structure analysis module operable to
given a set of updated activated elements, identify ~~at least one of~~ its update candidate set, which contains all active elements, ~~and or~~ corresponding content variables, which depend on at least one of the active elements in the given set, and determine at least one of the presence and absence of cyclic dependencies among active elements in the Web documents in the content net;

a module operable to, given an update candidate set, recursively update elements in the update candidate set;

a station as at least one of a collection of ports and a port complex for interchanging information over the Web, said station being a browser-based presentation of a Web document representing information contents in a content net;

a station net, which is a collection of said stations that are networked over the Web and which is accessible to human users in the Web environment, wherein each said station in the collection is derived from a Web document representing information contents in a designated content net;

wherein said station comprises:

internal reference ports operable to receive information from sources within said station net containing said station;

external reference ports operable to receive information from applications including database applications outside said station net;

initial ports operable to send information to other ports within said station net containing said station; and

a local port operable to keep information within said station for local use.

13. (Previously Presented) The computer-implemented system according to claim 12, wherein at least one of said external, initial and local ports in said station are equipped with at least one of:

control functions for update propagation within said entire station net;

control functions for importing information from external applications including database applications;

control functions for exporting information to external applications; and

control functions which are obtained by at least sequential or concurrent compositions of said control functions above.

14. (Previously Presented) The computer-implemented system according to claim 13, wherein the control functions can operate in at least one:

an operator control mode in which the control functions are initiated by human users; and

a program control mode in which the control functions are initiated by computer programs.

15. (Previously Presented) The computer-implemented system according to claim 12, wherein at least one of content variables and corresponding elements of a content file map to ports of said station corresponding to the content file by respecting the following constraints:

at least one of said internal reference ports is associated with a set of content variables which depend on other content variables via functional dependency clauses;

at least one of said initial ports is associated with a set of free variables;

at least one of said external reference ports is associated with a single free variable; and

said local port is associated with the set of all non-active elements which are not sub-elements of an active element.

16. (Previously Presented) The computer-implemented system according to claim 15, wherein a layout of each said station is specified in a Web-standard language including XSL separately from the content file of said station.

17-25. (Cancelled)

26. (Previously Presented) The computer-implemented system according to claim 13, wherein at least one content variables and corresponding elements of a content file map to ports of said station corresponding to the content file by respecting the following constraints:

at least one of said internal reference ports is associated with a set of content variables which depend on other content variables via functional dependency clauses;

at least one of said initial ports is associated with a set of free variables;

at least one of said external reference ports is associated with a single free variable; and

said local port is associated with the set of all non-active elements which are not sub-elements of an active element.

27. (Previously Presented) The computer-implemented system according to claim 14, wherein at least one content variables and corresponding elements of a content file map to ports of said station corresponding to the content file by respecting the following constraints:

at least one of said internal reference ports is associated with a set of content variables which depend on other content variables via functional dependency clauses;

at least one of said initial ports is associated with a set of free variables;

at least one of said external reference ports is associated with a single free variable; and

 said local port is associated with the set of all non-active elements which are not sub-elements of an active element.